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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,663	03/31/2004	Norris V. Li	EMC04-08(04032)	5960

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EXAMINER
AHN, SANGWOO

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _31 March 2004_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-30_ is/are rejected.

7)☒ Claim(s) _11,14 and 25_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _31 March 2004_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 112 (management application) in Figure 1, 160 (manageable entities) in Figure 3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 11, 14 and 25 are objected to because of the following informalities:

Line 14 of claim 11 needs to be indented and a semicolon needs to be inserted at the end of the phrase.

Line 12 of claim 14, the comma should be replaced by a semicolon.

Line 3 of claim 25, "the device" needs to be "the devices".

Appropriate corrections are required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 29 is directed to "a computer data signal having program code". Signals and waves are non-statutory. Signals and wave are a form of energy and energy does not fall into on of the categories of the invention.

Claim 30 lacks the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of §101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material, *per se*. For a system, an apparatus, a machine, or a device to be a physical object, at least one recited element must be hardware. If all elements would have been reasonably interpreted in light of the disclosure by one of ordinary skill as software alone, the claim is directed to software *per se* and is non-statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 6, 10 – 30 are rejected under 35 U.S.C. 102(b) as being anticipated

by U.S. Publication Number 2002/0178243 issued to Kevin Collins (hereinafter

"Collins").

Regarding claim 1, Collins discloses,

A method for organizing data comprising:

enumerating a plurality of device specific parameters in a common object model

adapted to normalize distinctions between the device specific parameters, the device

specific parameters corresponding to different devices by including normalized

parameters for each of the different devices (paragraph 7 lines 3 – 5; 9 – 12, et seq.);

receiving a request for device attributes, the device attributes indicative of the

device specific parameters corresponding to a plurality of dissimilar devices having

different device specific parameters (paragraph 50 lines 3 – 5, paragraph 53 lines 6 – 7;

10 – 12, et seq.);

computing a response responsive to the request, the computation employing the

normalized parameters in the common object model (paragraph 45 lines 15 – 29, et

seq.); and

communicating the response by employing the computed normalized

parameters, the normalized parameters independent of the device specific parameters

(paragraph 25 lines 10 – 11, paragraph 45 lines 23 – 24, Figures 5 – 8, et seq.).

Regarding claim 2, Collins discloses,

analyzing an interface specification indicative of the device specific parameters

(paragraph 39 lines 4 – 6, et seq.);

identifying similarities between the device specific parameters corresponding to

devices of different vendors (paragraph 39 lines 4 – 6, et seq.);

enumerating the similar device specific parameters corresponding to other device

specific parameters (paragraph 40, et seq.); and

defining the enumerated device specific parameters as indicative of a common

parameter in the common object model (Figure 3, paragraph 40, et seq.).

Regarding claim 3, Collins discloses,

translating device specific parameters to corresponding parameters in the

common object model, the translating further including

matching at least one device specific parameter to a common object

model parameter (paragraph 39 lines 4 – 6, paragraph 40, et seq.); and

computing an equivalent value for the common object model parameter,

the common object model parameter applicable to device specific parameters of

other devices (paragraph 39 lines 4 – 6, paragraph 40, et seq.).

Regarding claim 4, Collins discloses,

computing the query response employing the included device specific

parameters (Figures 5 – 8, et seq.).

Regarding claim 5, Collins discloses,

the devices are storage arrays corresponding to a plurality of vendors, each of

the vendors having an independent device interface specification (Figure 1 element

120, Figure 6, paragraph 22 lines 7 – 14, et seq.).

Regarding claim 6, Collins discloses,

the devices corresponding to a plurality of different interface specifications

(Figure 1 element 120, Figure 6, et seq.).

Regarding claim 10, Collins discloses,

interrogating device specific agents corresponding to the type of the device

(paragraph 5 lines 1 – 3, paragraph 23 lines 10 – 11, et seq.).

Regarding claim 11, Collin discloses,

A method of monitoring a managed information environment comprising:

analyzing interface specifications for a plurality of devices, each of the devices

having device specific parameters, the interface specification indicative of the device

specific parameters (paragraph 39 lines 4 – 6, et seq.);

identifying commonalities and distinctions between each of the analyzed

interface specifications (paragraph 39 lines 4 – 6, et seq.);

normalizing device specific parameters into a common object model, the

common object model operable to store the device specific parameters for each of the

plurality of devices without enumerating the identified distinctions (paragraph 7 lines 3 –

5; 9 – 12, et seq.);

receiving a query from a user, the query requesting a response including device

specific parameters (paragraph 50 lines 3 – 5, paragraph 53 lines 6 – 7; 10 – 12, et

seq.);

retrieving, from the common object model, the normalized device specific

parameters corresponding to devices implicated by the query (paragraph 25 lines 10 –

11, paragraph 45 lines 23 – 24, Figures 5 – 8, et seq.);

displaying, to the user, the computed query response, the computed query

response indicative of the device specific parameters and indifferent to the identified

commonalities and distinctions (paragraph 25 lines 10 – 11, paragraph 45 lines 23 – 24,

Figures 5 – 8, et seq.).

Regarding claim 12, Collins discloses,

the devices implicated by the query include a plurality of disk drive devices, the

disk drive devices further comprising a group indicative of protection mechanisms

applicable to the group, and wherein the normalized device specific parameters are

operable to indicate parameters applicable to the group (paragraph 29, paragraph 36,

paragraph 43 lines 17 – 18, et seq.).

Regarding claim 13, Collins discloses,

the parameters to the group further include parameters selected from the group

consisting of usable capacity, raw capacity, system capacity and allocated capacity

(paragraph 37 lines 5 – 7, et seq.).

Claims 14 – 23 are essentially the same as claims 1 – 10 except they set forth

the limitations as "a device" rather than "a method", therefore, rejected based on the

same rationale discussed in claims 1 – 10 rejections.

Claim 24 is rejected based on the same rationale discussed in claim 1 rejection.

Regarding claim 25, Collins discloses,

identifying interrelationships between the devices, and the computation of the

query response retrieves the interrelations between the device (Figure 6, et seq.).

Regarding claim 26, Collins discloses,

the interrelations between the devices, the normalized parameters indicative of

other devices coupled to the device (Figure 6, et seq.).

Regarding claim 27, Collins discloses,

the coupling between devices includes organization selected from the group

consisting of device groupings, host directors, host interfaces, clusters, redundancy,

RAID, failover, and shadowing (Figures 5 and 6, et seq.).

Claims 28 – 30 are essentially the same as claim 1 except they set forth the

limitations as "a computer program product", "a computer data signal", "a data

management device" rather than "a method", and therefore rejected based on the same

rationale discussed in claim 1 rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Collins in view of U.S. Patent Number 6,584,499 issued to Ray M. Jantz et al

(hereinafter "Jantz").

Regarding claim 7, Collins discloses the method of claim 1.

Collins does not explicitly disclose a varying arrangement of subdevices, each of

the subdevices having device specific parameters.

However, Jantz discloses a varying arrangement of subdevices, each of the

subdevices having device specific parameters (Figure 7, column 4 lines 22 – 31; 38 –

41, et seq.). At the time of the present invention, it would have been obvious to a

person of ordinary skill in the data processing art to combine the two references

because having subdevices and their parameters as disclosed by Jantz would have

enabled Collins' system to process mass operations with a plurality of managed device

which may be manufactured by different companies, avoiding error due to repeated

user interaction and providing automation and execution of a plurality of tasks (column1

lines 42 – 48, column 2 lines 4 – 6, et seq.).

Regarding claim 8, Jantz discloses back end parameters indicative of specific

subdevices within the device (column 4 lines 22 – 31; 38 – 41, et seq.).

Regarding claim 9, Jantz discloses that the subdevices are disk drives each

having independent storage device attributes (column 4 lines 22 – 31; 38 – 41, et seq.).

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Sangwoo Ahn whose telephone number is (571) 272-

5626. The examiner can normally be reached on M-F 10-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hosain Alam can be reached on (571)272-3978. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Sangwoo Ahn
Patent Examiner
AU2166

10/3/2006 SW

**HOSAIN ALAM
SUPERVISORY PATENT EXAMINER**